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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,419	03/02/2004	Cary Dikel Kornfeld		2418
35130	7590	04/18/2005		
CARY DIKEL KORNFIELD 468 SIERRA VISTA #7 MOUNTAIN VIEW, CA 94043			EXAMINER CHANG, AUDREY Y	
			ART UNIT	PAPER NUMBER
			2872	

DATE MAILED: 04/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/708,419	Applicant(s) KORNFELD, CARY DIKEL	
	Examiner Audrey Y. Chang	Art Unit 2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

**DETAILED ACTION***Specification***1. The disclosure is objected to because of the following informalities:**

The specification fails to *explicitly and clearly define* what are considered to be “*pinning effect*”, “*depth pinning*” and “*anti-pinning element*”. While applicant may be his or her own lexicographer, a term in a claim may not be given a meaning repugnant to the usual meaning of that term. See *In re Hill*, 161 F.2d 367, 73 USPQ 482 (CCPA 1947). The specification and claims using the term “pinning effect” and “anti-pinning element” to mean *something* that may interfere with the stereoscopic vision however the specification fails to teach **explicitly what exactly is so-called “pinning effect”** to make the scopes of the specification and the claims clear. The specification teaches something about “arbitrary stereoscopic clue” that is given by the so-called “anti-pinning element” however the specification fails to teach what is considered to be “**arbitrary stereoscopic clue**” and how can the anti-pinning element, which essentially is radiation of blue light is able to provide “arbitrary stereoscopic clues” to compensate the “pinning effect” while pinning effect is not even clear defined in the specification.

The applicant is respectfully reminded that the accepted meaning for “pinning effect” is “some processing step involved semiconductor system”, which is completely remote from the field of stereoscopic viewing. The term “pinning” in dictionary means “fastening down”, which is also unrelated to the field of stereoscopic vision.

**Appropriate correction is required.**

*Claim Rejections - 35 USC § 112***2. The following is a quotation of the first paragraph of 35 U.S.C. 112:**

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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3. **Claims 1-22 are rejected under 35 U.S.C. 112, first paragraph**, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification and claims **fail** to teach how could the so-called “anti-pinning element” such as radiation of blue wavelength placed at the border (claims 1-16), is capable of preventing the observer from “depth pinning” at the stereoscopic image display. Since the specification and the claims fail to clear define what is considered to be “pinning effect”, “depth pinning” and what exactly does an “anti-pinning element” do to “prevent the observer from the depth pinning” the claims are considered to be not enabling.

The specification and the claims also **fail** to teach how could an object “appears ... to approach a border” or “approaches to a border”, (as recited in claims 5, 7, 8, 15, 16, 21 and 22). It is not clear if the object is a moving object or what otherwise how can the object “approaches” the border? Approaching from where?

The specification and the claims also fail to teach how could “an object” being *stereoscopically generated* on a stereoscopic image display? A two-dimensional object will not give stereoscopic view so this object has to be *three-dimensional*. A **three-dimensional object** cannot be generated stereoscopically. Rather, *stereo image pair* of an three-dimensional object can be displayed on an image display and with the **help of optics** that stereoscopic vision, (which is a vision occurs in human brain), can be perceived by the observer.

The specification and the claims **fail** to teach how could the blue wavelength comprise wavelength including “*depth ambiguity*” and **fails** to teach what is considered to be “depth ambiguity” and *how could a wavelength achieve that*.

#### ***Claim Objections***

4. **Claim 14 is objected to under 37 CFR 1.75(c)**, as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The radiation including blue wavelength has already been claimed in its based claim 11.

5. **Claims 1-22 are objected to because of the following informalities:**

(1). The phrases “depth pinning” and “anti-pinning” recited in claims 1, 11 and 17 are confusing and indefinite since it is not clear what exactly do these phrases mean, which therefore *makes the scopes of the claims unclear*.

(2). The phrase “generates said object from elements projected on ... screen” recited in claim 6 is confusing and indefinite since it is not clear what are these “elements”.

(3). The phrase “is activated *only* when objects *approach* the border” recited in claims 7, 15 and 21 and the phrase “vary intensity as objects *approach* the border” recited in claims 8, 16 and 22 that are confusing and indefinite since it is not clear how exactly do the objects *approach* the border? Are they moving? What makes them move? The scopes of the claims are really unclear.

(4). The phrase “objects” recited in claims 7-8, 15-16 and 21-22 is confusing and indefinite since it lacks proper antecedent basis from their respective based claims. Singular “object” is claimed in their respective based claims.

(5) The phrase “depth ambiguity” recited in claim 10 is confusing and indefinite since it is not clear what does it really mean and this makes the scopes of the claim unclear.

(6). Regarding claims 12 and 18, the phrase “for example” (or e.g.) renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

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(7). The phrase “*any* display device capable of including a stereoscopic illusion” recited in claims 12 and 18 is considered to be *omnibus* which fails to provide the definite scopes of the claims.

(8). The phrase “varying in intensity” recited in claim 22 is confusing and indefinite since it is not clear the intensity is referred to what?

**Appropriate correction is required.**

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. **Claims 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by patents issued to Henkes (PN. 3,701,581) or Rickert (PN. 4,651,219) or O’Neill (PN. 5,691,843).**

The phrases “depth pinning” and “anti-pinning element” are not well defined in the specification and the claims they are therefore examined in the broadest interpretations “*means for suppression stereoscopic cues at the surrounding areas of the stereoscopic image pairs to enhance the stereoscopic viewing of the image pairs*”.

**Henkes, Rickert and O’Neill each teaches an *image display means* for displaying stereoscopic image information of an object to allow stereoscopic vision, (81, for Henkes in Figure 5, 10, for Rickert Figures 1-2, and 211, for O’Neill Figures 3A and 4-8), and an *anti-pining element* such as a *stereoscopic frames* (83, Figure 5-7 for Henkes), a *bezel* or *curved regions* (6, Figures 1-2 for Rickert) or *shadowgraph frame* (such as shown in Figures 3A and 4-8, for O’Neill) wherein each of the stereoscopic frame, curved regions or the shadowgraph frame is formed at the *periphery* of the image display such that these**



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elements *suppress* the *stereoscopic cues* of the image at the border regions (please see column 2, lines 55-64) and causes *defocusing* of the *edge* of the stereo image pairs displayed, (please see column 1 of Henkes) so that the stereoscopic vision of the object image can be enhanced.

With regard to claim 18, Henkes, Rickert and O'Neill teaches that the stereoscopic image information of the object can be displayed on the image display means by any standard and conventional stereoscopic image illusion methods.

Each of these references has therefore **anticipated** the claims.

#### *Claim Rejections - 35 USC § 103*

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. **Claims 1-16 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over the patent issued to Henkes (PN. 3,701,581) or Rickert (PN. 4,651,219) or O'Neill (PN. 5,691,843).**

The phrases "depth pinning" and "anti-pinning element" are not well defined in the specification and the claims they are therefore examined in the broadest interpretations "*means for suppression stereoscopic cues at the surrounding areas of the stereoscopic image pairs to enhance the stereoscopic viewing of the image pairs*". *The scopes of the claims are not well defined for the reasons stated above they therefore cannot be examined with details.*

Henkes, Rickert and O'Neill each teaches an *image display means* for displaying stereoscopic image information of an object to allow stereoscopic vision, (81, for Henkes in Figure 5, 10, for Rickert Figures 1-2, and 211, for O'Neill Figures 3A and 4-8), and an *anti-pining element* such as a *stereoscopic*

*frames* (83, Figure 5-7 for Henkes), a *bezel* or *curved regions* (6, Figures 1-2 for Rickert) or *shadowgraph frame* (such as shown in Figures 3A and 4-8, for O'Neill) wherein each of the stereoscopic frame, curved regions or the shadowgraph frame is formed at the *periphery* of the image display such that these elements *suppress* the *stereoscopic cues* of the image at the border regions (please see column 2, lines 55-61) and causes *defocusing* of the *edge* of the stereo image pairs displayed, (please see column 1 of Henkes) so that the stereoscopic vision of the object image can be enhanced.

Each of these references has met all the limitations of the claims with the exception that they do not teach explicitly that the anti-pinning element is provided by emitting blue light radiation. However **Henkes** teaches explicitly that the stereoscopic frame is provided to *defocus* the edge of the image at the border and to *delocalize* the image information with respect to the surrounding in order to enhance the stereoscopic vision of the object image, (please see column 1). **Henkes** teaches that the stereoscopic frame may comprise plates (61-66, Figures 6-7) with different degrees of transparency. **Rickert** teaches that the anti-pinning is achieved by providing means to *suppress*, *hide* or *camouflage* the image display plane by suppressing the stereoscopic cues in the areas surrounding the image plane and to *terminate* the outer periphery of the surrounding the areas in the image plane other than the image, (please see column 2, lines 55-64). **O'Neill** teaches that the shadowgraph frame is provided as light-blocking frame such that it cause the image appears to recede from the frame which therefore enhances the depth perception, (please see column 3). These suggest that any means will cause defocusing or blurring the border of the image will serve as the "anti-pinning element" to enhance the stereoscopic vision. And it is obvious to one skilled in the art to including certain the means to emit radiation of blue wavelength since it certainly will have the shading effect for defocusing the edge, suppressing the stereoscopic cues at the surrounding and form light blocking frame to achieve the same effect as an alternative means and easy means, (since providing blue light is very simple) to enhance the depth perception.



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With regard to feature concerning screen, the cited references all recite a screen for displaying the image. With regard to feature concerning varying intensity, Henkes teaches explicitly that the stereoscopic frame has varying transparency or varying intensity.

With regard to claim 12, Henkes, Rickert and O'Neill teaches that the stereoscopic image information of the object can be displayed on the image display means by any standard and conventional stereoscopic image illusion methods.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Audrey Y. Chang whose telephone number is 571-272-2309. The examiner can normally be reached on Monday-Friday (8:00-4:30), alternative Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A. Chang, Ph.D.

*Audrey Y. Chang*  
Primary Examiner  
Art Unit 2872  
